

**APPARATUS AND METHOD OF BUILDING AN ELECTRONIC  
DATABASE FOR RESOLUTION SYNTHESIS**

**ABSTRACT OF THE DISCLOSURE**

5           An electronic database for image interpolation is generated by a computer.  
The computer generates a low-resolution image from a training image, a plurality  
of representative vectors from the low-resolution image, and a plurality of  
interpolation filters corresponding to each of the representative vectors. The  
interpolation filters and the representative vectors are generated off-line and can  
10 be used to perform image interpolation on an image other than the training image.  
The database can be stored in a device such as computer or a printer.